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AUTHOR Flanagan, Mary
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ABSTRACT

Eliminating gender imbalances online should be possible with the ability to mask identity and move in worlds anonymously. If almost half of Internet participants are women, what is happening in the social realm of online space in relation to these numbers? This paper shows how a course at the State University of New York at Buffalo called "Gender and Technology" introduced students to online chat and from there evolved into a larger study involving online avatar representation, chat, and gender. Language, time of day, and avatar representation are examined for their significance in creating gender stereotypes. (Contains 5 figures and 17 references.) (Author/AEF)

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Practicing Stereotypes: Exploring Gender Stereotypes Online

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Mary Flanagan, Assistant Professor of Digital Arts
Department of Media Study, 231 Center for the Arts
State University of New York at Buffalo
Buffalo, New York 14260 U.S.A.
marydot@ibm.net, http://mflanagan.fal.buffalo.edu

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Abstract:
Eliminating gender imbalances online should be possible with the ability to mask identity and move in worlds anonymously. If almost half of Internet participants are women, what is happening in the social realm of online space in relation to these numbers? This paper shows how a course called "Gender and Technology" introduced students to online chat and from there evolved into a larger study involving online avatar representation, chat, and gender. Language, time of day, and avatar representation are examined for their significance in creating gender stereotypes.

Introduction

The forms of communication and access afforded by the Internet have helped define cultural assumptions and realities in relationship to technology. The intersection of these forms has implications in most corners of historical, scientific, and cultural study. Gender study in conjunction with practices relating to technology offers an important site to study the impact of the union of technology and culture. An abundance of research on gender and technology has focused on the imbalance in education at the elementary level. The declining percentages of women in technology reflect the documented gender bias in the design and delivery of technological knowledge (Swanson, 1997; Mangione, 1995). Higher education, while studied less frequently, offers a similar environment. Despite a widely publicized national need for information technology, knowledge media, and instructional technology professionals (Wee, 1998; Furger, 1998), technology courses and programs do not attract a large percentage of women. The number of women entering University-level Computer Science programs in North America has declined steadily over the past two decades (Department of Education's National Center for Statistics, Computing Research Association's Taulbee Survey). To rectify the inequities, schools such as the University of Massachusetts are offering courses online. Representatives of the school argue that Internet-based courses allow teachers and students to interact openly and equitably, without bias based on race, age, or gender (Colker, 1995)

Gender stereotypes about technology strongly affect adolescent girls and women. (Brunner, 1994; Furger, 1998) Many females hesitate to disclose much personal information online in order to avoid damaging assumptions such as condescending presumptions about the knowledge level of female users (Furger, 1998, p. 72). While most female users value the Internet for its usefulness in thwarting stereotypes about looks, clothes, ethnicity, and so on, (Furger, 1998, p. 71) overall they are extremely cautious users. "Many of the chat rooms—even those ostensibly set up for children and young adults to talk about hobbies or books or movies—have turned into virtual pick-up scenes. Newcomers are often asked to give their "stats," and with many older teens and adults participating in the chats the conversation can quickly take a vulgar turn" (Furger, 1998, p. 74). This type of incident happens outside of notorious chat rooms, as well. Stephanie Brail (1996, p. 146) tells her story as a victim of online harassment. While participating in the Usenet newsgroup *alt.zines*, Brail became the subject of hundreds of harassing, threatening emails sent by an online stalker. She claims that because of such incidents, she and many other female Internet users censor themselves when participating in "public" groups online (p. 147).

Eliminating gender imbalances online should be possible with the ability to mask identity and move in worlds anonymously; unfortunately, intimidation in cyberspace can translate to verbal intimidation (Sutton, 1996, p. 171). Susan Herring has found invariably in her studies on gender and computer use that online communication is male-oriented and dominated by the use of assertive language and confrontational

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approaches (Sutton, 1996, p. 175). In addition, women's' technology skills lag behind the skills of their male counterparts (AAUW, 1998, p. 54). It comes as a surprise, then, that in 1997, the number of females using the Internet was almost parallel to the number of male users. Over 40% had used the Internet at home or in the office during the last 30 days, and 47% of women surveyed had access to the Internet through home or work (Dept. Office of Educational Research and Improvement, National Center for Education Statistics, 1997). Online spaces are cited by many women as a chance to speak openly and democratically, allowing underrepresented groups to have a voice (Gersch, 1998). Access, however, is different than usage time. In the Times-Mirror and SPPA surveys of 1997, men who use computers at home give weekly usage estimates that are 20 percent higher than female users (Robinson, Levin, and Hak, 1998). The Internet should serve as a tool of empowerment for women. If almost half of Internet participants are women, what is happening in the social realm of online space in relation to these numbers? Why is access so high a percentage, but hourly usage measured so much lower than men's usage? Does the "evening out" of the number of users also balance gender inequities in online interaction? Could this imbalance stem from differences in language usage online, time of day, or forms online avatar representation?

The Context

The Internet proved to be an effective tool to explore gender stereotypes, identity issues, and gender awareness during a course called Gender and Technology in the Department of Media Study, State University of New York at Buffalo. The course took a rather untraditional approach to gender study in relationship to technology. While focusing on theory relating to gender issues, students actively engaged with films, advertisements, web sites, photographs, online art, and literature. Topics included: the role and recognition of female weavers in Imperial China, women's relationship to the industrial revolution, men's connection to the cyborg body, changing gender roles as technology infiltrated the home and office, and today's technological developments as they relate to gender, identity, and sexuality. At first many students were forcibly opposed to the word "feminism;" however, as the students had little positive experience with the concept behind the now somewhat negative classification. Towards the end of the course, students had developed sensitivity to gender issues through various media, open discussions, and real world experiences.

In order to develop those "real world" experiences of gender bias and discrimination, students were assigned to one of five online chat rooms. Surprisingly, 13 students (half of the class) had never experienced online chat or any other form of live Internet interaction. At a University of 26,000 undergraduates, well equipped with public computer facilities and wired dorms, this seemed unusual – especially given the publicity chat has received in computer magazines and in popular media. One session was spent exploring chat communication in depth. Taking the students to "The Palace" chat room (http://www.thepalace.com), the students donned gratis avatars (smiley face icons) and set about typing messages to strangers. The students and instructor discussed who might be in the room, what time of day might attract different users, and reasons for choosing avatar representation. Several chatters already in the room asked sex, age, and appearance questions; conversation was limited. The limited, staggered text interaction with other visitors almost encouraged users to leave. Although some private or "closed" sites may offer deeper interaction, these students were *newbies* trying to find meaning on the web together. Most students in the room were shocked (or snickering) about the amount of conversation in the rooms that focused on sex or "picking up" other avatars.

The Short Study: Student Run

Online graphic chat tools are wonderful venues to foster discussions about identity and stereotypes. The online environments offer the distance and anonymity for students to take the risk of expressing and defining themselves in a proactive manner. After the introduction to chat, 6 male graduate and undergraduate students implemented an introductory survey of chat room identity. Using a dialogue script, the group met at several different times and informally recorded how they were received in the rooms, including language used and appearance of the avatar chosen. The male user/participants in this preliminary study found that as female characters, their overall impression of "public" online experience was frustrating. According to post-project interviews, the men were spoken to, followed, and harassed three times the amount of their male avatar counterparts. One 22 year-old student noted, "If they could just get over the fact that I might be a woman or a man --that it just doesn't matter--we could actually have a conversation." Most of the student participants noted in participation surveys that the level of interaction

currently possible in online chat was superficial, slightly offensive, and ultimately boring. The male students who conducted their class project were surprised at the kinds of harassment they suffered online. The college-age participants' summaries led to a consensus: many public chat sites and virtual worlds have the feeling of the dorm room party that repeats itself nightly. They had been asked too many times, "Wanna Cyber?" and "sex/age/weight??" One participant stated that when he first discovered chat, he desired to grow from the experience of communicating with an international "community;" however, the six students surveyed before and after their short study all cited that they had lower expectations for future online interaction.

The Full Study

After the preliminary student study, a larger study involving online avatar representation, chat, and gender began. The smaller experiment had generated a good deal of interest and conversation about the role of the graphic icon and its relationship to the gender of online computer users. The goal of the larger study was to see if and how the reliance on a graphic as representation affects interaction.

Microsoft Comic Chat --a chat space that uses a comic strip look and feel for interaction—was used as the online setting. The background for the chat is graphically similar to a comic strip in that it uses square frames for each "scene" in the chat process (see Fig. 1 and 2.) Users choose from several dozen comic strip character graphics to serve as avatar representations. To communicate, users type to chat and the text appears in "talk balloons" protruding from character's mouths and extending over character's heads. Comic strips generated in Comic Chat can later be printed out or saved.

Figure 1 Male Avatar, Comic Chat

Figure 2 Female Avatar, Comic Chat

Using a script to enact repeatable, live dialogue, the two participants used either all-male or all-female avatar representations during one of six chat episodes. The avatars (Figures 1 and 2) were chosen because they were clear representation of male and female without overly sexualizing the characters. The participants' characters were named with gender-neutral titles (eg. Anyone). Rooms attended (from over 100 available) were chosen because of their gender-neutral titles; rooms using suggestive or sexual names were avoided. In addition, the room chosen had to be occupied with at least three public users. The average number of occupants was 8, with a peak at 11.Separated spatially during the study (different labs), they would arrive in particular Comic Chat domain at a specific time and proceed to greet each other and type out the script in a conversationally timed pace. The script detailed happenings at a party and allowed each member a similar number of lines—each character had approximately 25 - 30 lines of dialogue in the conversation. The script was filtered for gender-related pronouns and other descriptors in order to make no gender references in the text originating from the home base of the study. Of course, interaction with the public characters added slight variation to the dialogue. For example, dialogue had to be repeated at times to clarify a particular concept or sentence to a public user.

Six performances of the script were scheduled over two consecutive days: 2 the first day, one the second. Three chat areas were used, one each half-hour, in a sequence and in locations known only to the participants. Non-descript, non-suggestive rooms were chosen. Different times were chosen in order to offer the opportunity for different demographic groups to potentially react to the dialogue; after-work times were selected in order to avoid issues of censorship or self-monitoring at the workplace. The first day, the

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dialogue was enacted at 11:00 p.m. and 12:00 a.m. The second day, the dialogue was enacted at 6:00 p.m. Each dialogue set took approximately 18 – 26 minutes to perform. The gender of the characters was changed each half-hour and a new room chosen for the dialogue.

Figure 3. Male Avatar from Research Group Meets Public User in Comic Chat "Room1"

Figure 4. Female Avatar from Research Group Meets Public User in Comic Chat "Room1"

Findings

The chart below details several research issues mapped out in the avatar and gender study. First, the date and time of the performance are listed. From that list one can see which gender the test group appeared as in the chat world. The number of users in a room changed the kinds of interaction towards the test group. The number of "whispered," or person-to-person messages, were also measured, along with the number of questions the public users in the room directed towards one or more members of the test group. Finally, the group was asked to rate the number of potentially harassing comments directed at them during the course of interaction.

Date/Time	Avatar Gender For Study Participants	Number of Users In Room	Number of 'whisper' msgs sent	Number of questions directed at test subjects	Number of directed references to sex/gender	Number of directed, potentially harassing comments
Day 1						
11:00 p.m	Male	11	2	5	4	1
11:30 p.m	Female	6	8	13	11	6
12:00 a.m	Male	9	2	12	13	2
12:30 a.m.	Female	7	8	19	29	15
Day 2						
6:00 p.m.	Male	5	1	5	1	3
6:30	Female	11	0	9	7	3

Figure 5. Data gathered from online study of gender and avatar representation

Finding 1. Language use varies according to avatar representation.

Two striking features of the experiment are the amount of questions directed at users utilizing female avatars, and the way in which language is used towards the avatars of different genders. Female avatars were the recipients of more questions by public chatters than were male avatars across the board, and additionally the interaction by the public to the test subjects tended to include references to sex/gender. In this study, the more "whisper" (private, person-contacting-person directly outside the public chat arena; also called direct sends or instant messages) messages sent, the more likely the comments made by the public user were judged to be potentially harassing to female avatars.

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While extremely difficult to quantify, participants in the study also observed an overall attitude shift by public chatters in relation to their representation. They note that male avatars used "smooth-talk" to interact with the female avatars more than male avatars, and cited that male-avatar to male-avatar conversations were more blunt and direct. Comparing the examples of Figures 3 and 4, we can see that two profanities (blocked out for this paper) appear from public chatters while the participants were represented as male avatars.

Finding 2. Time of day can affect interaction response.
In this study, later chat times tended to include more sexually oriented chat that earlier time slots. Reasons postulated for this can be based on Brail's work, who notes that some chat rooms "are notorious for having a barlike atmosphere…should you enter a chat room using a woman's login name, you're likely to find yourself the target of a wanna fuck instant message" (p. 142).

Finding 3. Harassment was defined before the study in terms set forth by Brail (1996, p. 142): The frequency, persistency, and/or unwanted, threatening, or offensive communication from one user to another. As Brail notes, however, there is "a huge gap between legal definitions of harassment and what we describe as harassment in common parlance" (p. 142). For the study, the participants based their definition of harassment on the way they received the language directed at them. This is clearly a subjective area for the individuals involved, yet can be cursorily documented by the variance between differently-gendered avatars using the same dialogue script. The amount of harassing language directed at female participants is high in the documentation of this study. It is important to note, however, that male avatars were also harassed, though with less repetition. The comments cited as harassing were often threats of violence, but were not necessarily tied to sexual terms.

Conclusion

From this study, we can see that online interaction using gendered avatar representation is in fact consistently approached along gender-specific lines, and that often these approaches include specific targeting of users and forms of harassment. Both stereotypical treatment of female avatars and stereotypes about characters representing themselves as female through their iconographical presence are prevalent. Gender stereotypes within technological arenas such as the Internet exist through the continuation of non-internet practices. Sandy Stone suggests that until online identities are interpreted as "personae", outside the "pre-net assumptions about the nature of identity," we cannot reexamine stereotypes, nor can we think deeply about alternative forms of identity construction (1995, p. 81). Additionally, the reliance on the graphic as the site of representation brings with it a loaded message that can ultimately reinforce gender stereotypes. Online graphic chat tools are wonderful venues to foster discussions about identity and stereotypes. The online environments offer the distance and anonymity for students to take the risk of expressing and defining themselves in a proactive manner.

Oddly, while cyberspace allows users to create almost anything that can be imagined, we design societies and environments that mirror what already exist, rife with gender, racial, and other bias. According to an interview with the technology-driven performance artist Stellarc, "consider the fact that it's only through radically redesigning the body that we will end up having significantly different thoughts and philosophies"(Atzori and Wollford, 1997, p. 196). Stellarc notes, "I think our philosophies are fundamentally bounded by our physiology" (p. 196). If he is right, then why, do we not truly escape our bounds when in a virtual space? And if we do, why then, when we have the opportunity to redesign and rethink what the body really is, we do not?

Ultimately it is by questioning culturally formed identity, experience, and political standing that we can begin to disrupt our assumptions about ethnicity, class, and gender, and ultimately, our beliefs in absolute and fixed identities (Harding, 1991, p. 110). Unsettling these stereotypes should serve to offer all Internet users a chance to see and share multiple perspectives about gender bias. There are tremendous benefits to online interaction: building communities, learning via distance education, sharing advice around the globe, and access to a wealth of information resources make the web a great place to be. Studying online interaction styles can therefore reveal the general conceptual framework formulated by users in relation to gender and help postulate a method for change.

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